

Applicable standard										
Rating	Operating temperature range	-55°C to + 105°C (NOTE 1)		Storage temperature range	-10°C to + 60°C (NOTE 3)					
	Operating humidity range	20% to 80% (NOTE 2)		Storage humidity range	40% to 70% (NOTE 3)					
	Voltage	1000V AC/DC		Applicable connector	DF60(R)-*S-10.16C(##)					
	Current (*1) 	AWG10	40A	Applicable cable	AWG 10-12					
	Rated voltage	Rated current		Overvoltage category	IP-Degree					
UL	600V AC/DC	AWG10:55A/AWG12:45A (At Ambient Temp. 25°C) (Note 5)		—	—					
C-UL	600V AC/DC	See above (*1) (Temp. rise up 30°C MAX)		—	—					
TÜV	600V AC/DC	See above (*1)		III	IP00					
Specifications										
Item	Test method		REQUIREMENTS		QT	AT				
Construction										
General examination	Visually and by measuring instrument.		According to drawing.		X	X				
Marking	Confirmed visually.				X	X				
Electric characteristics										
Contact resistance millivolt level method	DC6V MAX, 1A		2mΩ MAX.		X	—				
Mechanical characteristics										
Contact insertion and extraction forces	1.0±0.002 by steel gauge.		Insertion force Extraction force	12.0 N MAX. 2.0 N MIN.	X	—				
Mechanical operation	30times insertions and extractions.		①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.		X	—				
Vibration	Frequency 10 to 500 Hz, total amplitude 1.5mm, Acceleration 98m/s ² , at 2h for 3 directions.		①No electrical discontinuity of 1 μ s. ②No damage, crack or looseness of parts.		X	—				
Shock	490 m/s ² duration of pulse 11 ms at 3 times each for 3 both axial directions.		①No electrical discontinuity of 1 μ s. ②No damage, crack or looseness of parts.		X	—				
Crimp tensile strength	Apply wire tensile strength to caulking area axially until wire become loosen or breakdown.		AWG10 401N MIN AWG12 313N MIN		X	—				
Environmental characteristics										
Damp heat (steady state)	Exposed at 40 ± 2°C, 90 to 95 %, 96 h.		①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.		X	—				
Rapid change of temperature	Temperature -55°C → +85°C Time 30MIN → 30MIN Under 25 cycles. (The transferring time of the tank is 2-3 MIN) (After leaving the room temperature for 1-2h.)		①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.		X	—				
Dry heat	Exposed at 105 ± 2°C, 250h (After leaving the room temperature for 1-2h.)		①Contact resistance: 2 mΩ MAX. ②No damage, crack or looseness of parts.		X	—				
Remarks										
Note1: Include the temperature rising by current. Note2: No condensing. Note3: Apply to the condition of long term storage for unused products before PCB on board. After mounted on PCB board, operating temperature and humidity range is applied for interim storage during transportation.										
	Count	Description of revisions	Designed	Checked	Date					
	8	DIS-H-00002440	TS. KUMAZAWA	TS. FUKUSHIMA	17.01.06					
Unless otherwise specified, refer to IEC 60512.				Approved	KI. AKIYAMA					
				Checked	TS. FUKUSHIMA					
				Designed	TS. KUMAZAWA					
				Drawn	MI. SAKIMURA					
Note QT:Qualification Test AT:Assurance Test X:Applicable Test				Drawing no.						
	Specification sheet			ELC-342869-00-00						
	HIROSE ELECTRIC CO., LTD.			Code no.	CL680-3022-7-00	 1/7				



(Note 4)Derating curve takes manufacturing tolerances into consideration as well as uncertainties in temperature measurement and the measuring set up and is derived from the basic curve multiplied by 0.8 calculation.

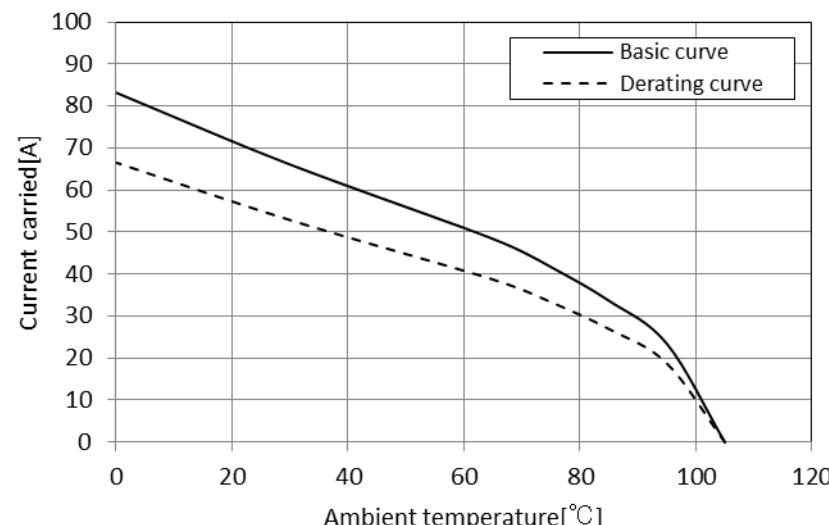
(Note 5)The value of rated current differs depending on the ambient temperature.
It is recommended to use the product within the derating curve zone.

(Note 6) Measurement method of derating curve is shown below.

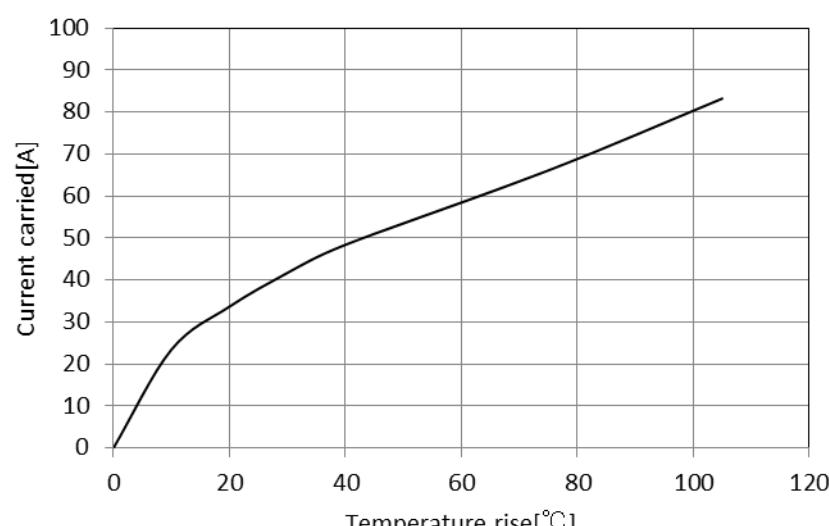
- Test specimen:Unused DF60-2P-10.16DS(27).
Unused DF60-2S-10.16C
Unused DF60-1012SCFA
- Test cable spec:AWG 10
- Test condition: Turn on electricity under the static state and measure.
(Test report # TR680E-20773)

[Reference]

Derating curve



Temperature rise curve



Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.		ELC-342869-00-00	
HS	SPECIFICATION SHEET	PART NO.	DF60-1012SCA	CODE NO.	CL680-3022-7-00
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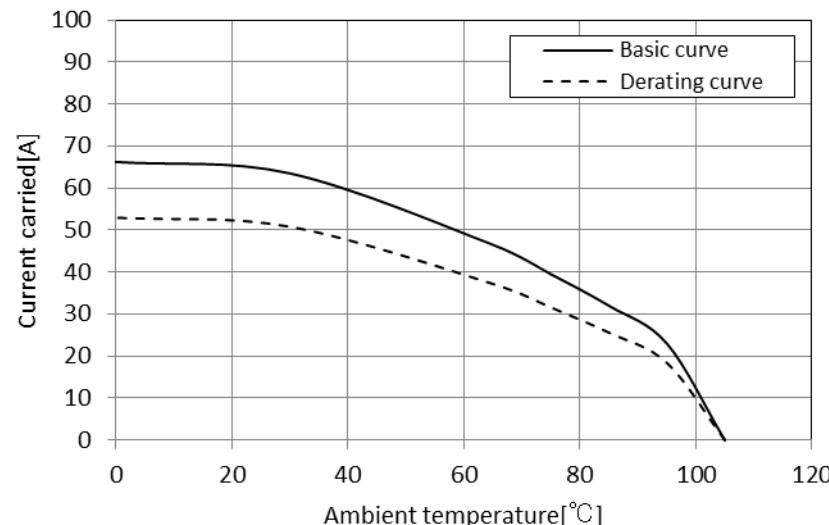


(Note 7) Measurement method of derating curve is shown below.

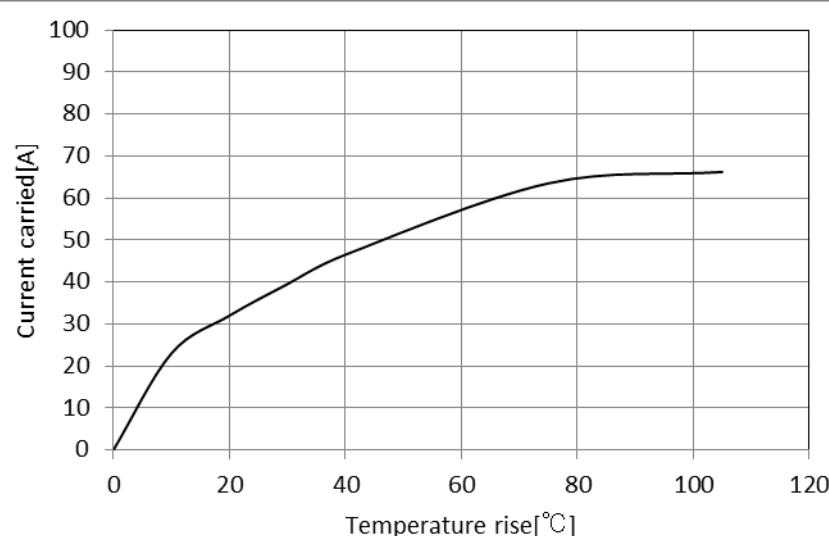
- Test specimen: Unused DF60-3P-10.16DS(27).
Unused DF60-3S-10.16C
Unused DF60-1012SCFA
- Test cable spec: AWG 10
- Test condition: Turn on electricity under the static state and measure.
(Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



Note QT:Qualification Test AT:Assurance Test X:Applicable Test	DRAWING NO.	ELC-342869-00-00
HS	SPECIFICATION SHEET	PART NO. DF60-1012SCA
	HIROSE ELECTRIC CO., LTD.	CODE NO. CL680-3022-7-00



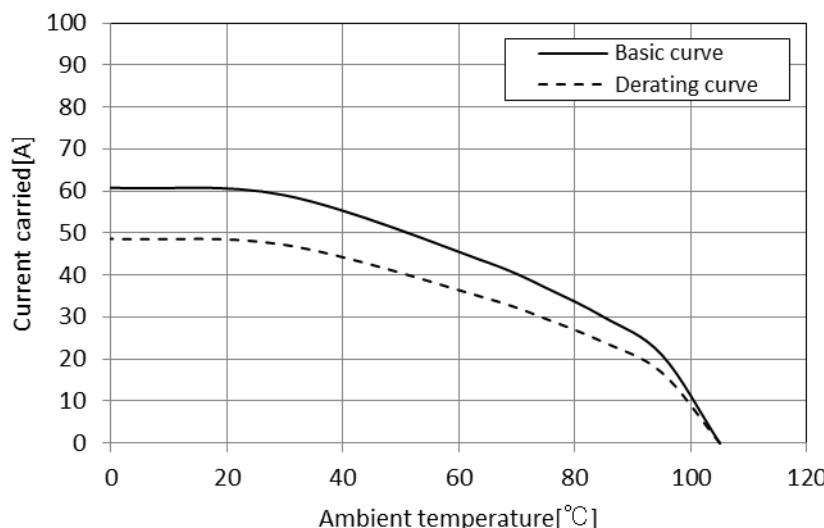


(Note 8) Measurement method of derating curve is shown below.

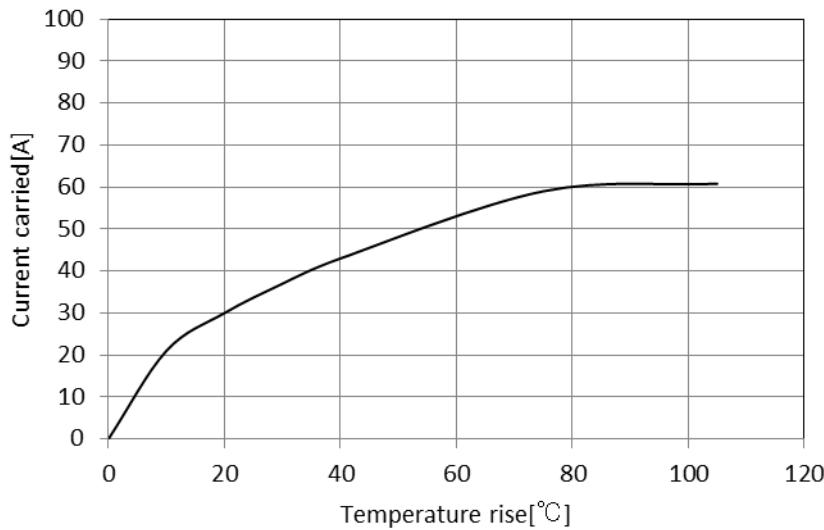
- Test specimen: Unused DF60-6P-10.16DS(27).
Unused DF60-6S-10.16C
Unused DF60-1012SCFA
- Test cable spec: AWG 10
- Test condition: Turn on electricity under the static state and measure.
(Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



Note QT:Qualification Test AT:Assurance Test X:Applicable Test	DRAWING NO.	ELC-342869-00-00
HS	SPECIFICATION SHEET	PART NO. DF60-1012SCA
	HIROSE ELECTRIC CO., LTD.	CODE NO. CL680-3022-7-00



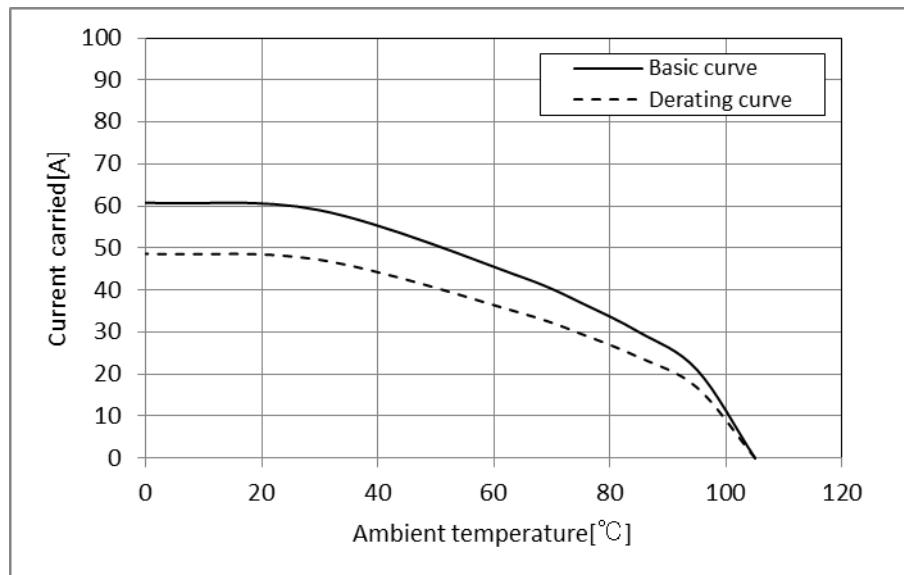


(Note 9) Measurement method of derating curve is shown below.

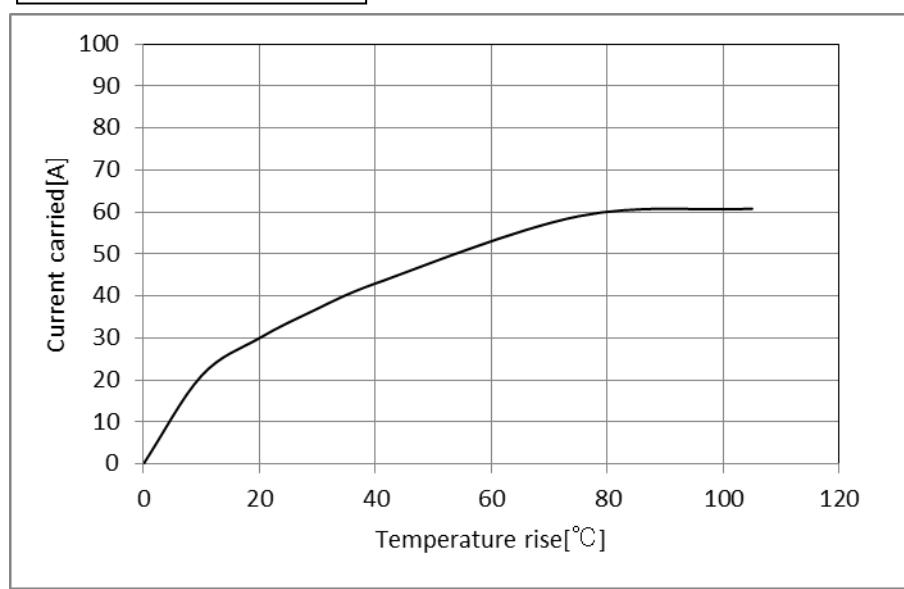
- Test specimen: Unused DF60-1P-10.16DS(27).
Unused DF60-1S-10.16C
Unused DF60-1012SCFA
- Test cable spec: AWG 12
- Test condition: Turn on electricity under the static state and measure.
(Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO.

ELC-342869-00-00



SPECIFICATION SHEET

HIROSE ELECTRIC CO., LTD.

PART NO.

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CODE NO.

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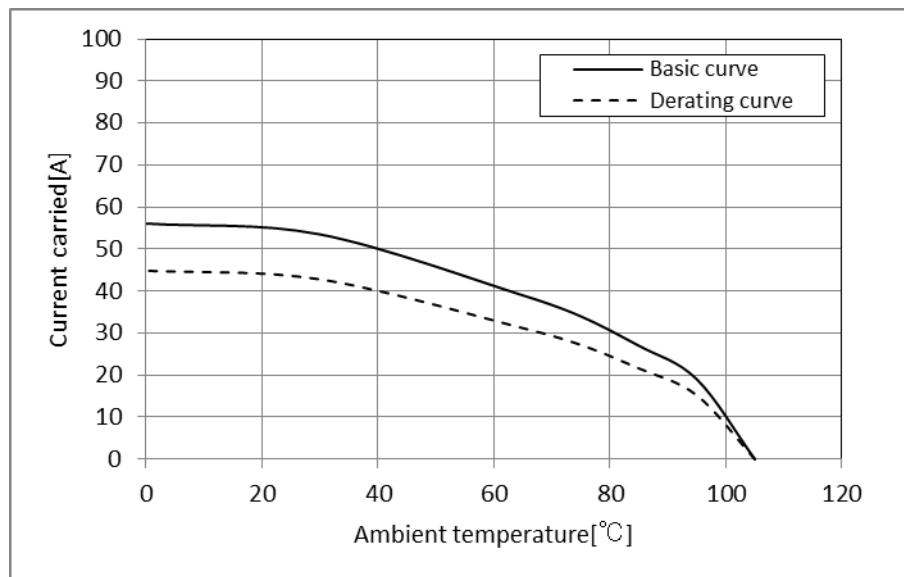


(Note 10) Measurement method of derating curve is shown below.

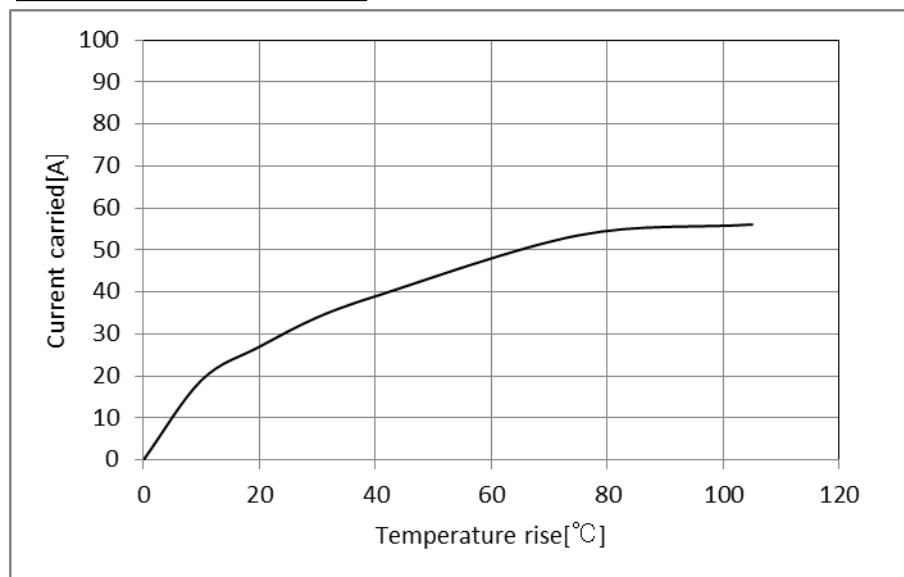
- Test specimen: Unused DF60-3P-10.16DS(27).
Unused DF60-3S-10.16C
Unused DF60-1012SCFA
- Test cable spec: AWG 12
- Test condition: Turn on electricity under the static state and measure.
(Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



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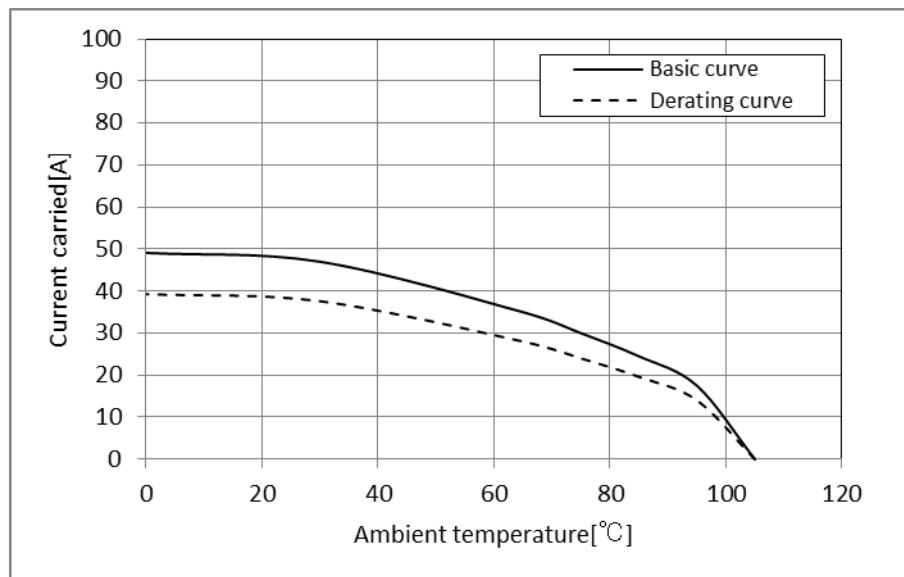


(Note 11) Measurement method of derating curve is shown below.

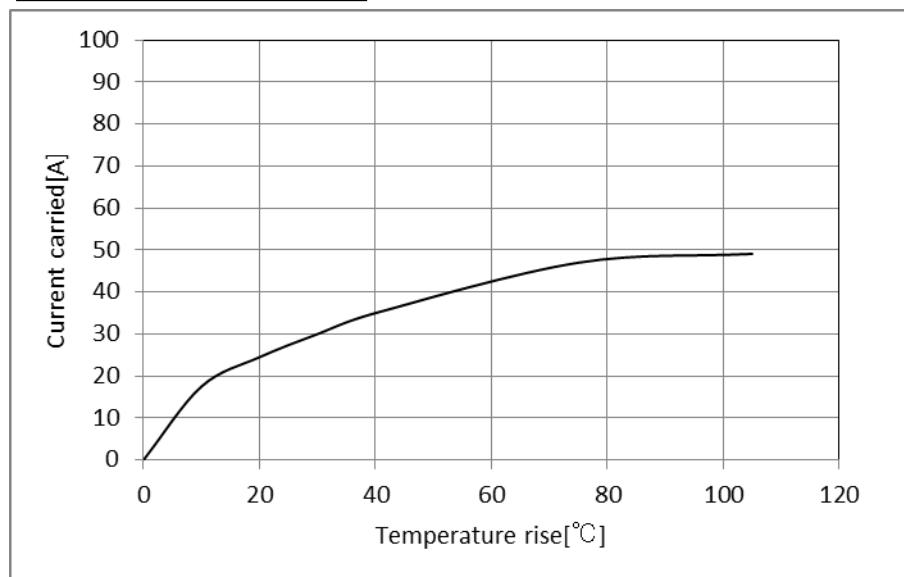
- Test specimen: Unused DF60-6P-10.16DS(27).
Unused DF60-6S-10.16C
Unused DF60-1012SCFA
- Test cable spec: AWG 12
- Test condition: Turn on electricity under the static state and measure.
(Test report # TR680E-20802)

[Reference]

Derating curve



Temperature rise curve



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